

California Arbovirus Surveillance Bulletin # 30

Week 45 Friday, November 12, 2004

Weekly Summary

California Weekly Summary Comments:

This week, California reported 11 new humans infected with West Nile virus (WNV). As of November 12, 2004, a total of **805** WNV infections have been reported from the following local health jurisdictions: Los Angeles (323), San Bernardino (190), Riverside (108), Orange (66), Kern (59), Fresno (14), Tehama (10), Butte (7), Shasta (6), Glenn (3), Tulare (2), Ventura (2), Imperial (1), Lake (1), Lassen (1), Merced (1), Placer (1), Sacramento (2), San Diego (2), San Joaquin (3), Santa Clara (1), San Luis Obispo (1), and Yolo (1) counties. Sixty-nine of the 805 WNV infections were initially detected in asymptomatic individuals through screening done at blood banks – 12 of these individuals later became symptomatic.

Of the 748 WNV cases with symptoms, 273 are classified as West Nile fever cases, 219 are classified as West Nile neuroinvasive disease, and 256 are of unknown status. The median age for all cases where data was available is 52 years (range: 2-94 years). Median age for West Nile fever cases is 49 years (range 7-89 years). Median age for West Nile neuroinvasive disease cases = 58 years (range: 4-91 years). Sixty-two per cent (463/748) of the cases are male. There have been 24 fatalities to date in California in Los Angeles (12), San Bernardino (5), Orange (3), Riverside (2), Kern (1), and Tehama (1) counties. The median age of the 24 fatalities is 75.5 years (range: 57-91 years).

Equine:

The California Department of Food & Agriculture reported no WNV equine cases. Currently, the YTD total stands at 533 positive cases. A total of 227 horses have died or euthanatized from the WNV infections.

Dead Birds:

The hotline received 458 reported dead birds last week (YTD = 91,342). The UC Davis Center for Vectorborne Diseases (CVEC) reported 30 out of 67 dead birds submitted last week have tested positive for WNV by RT-PCR: American crows (4), an American robin (1), a barn owl (1), Brewer's blackbirds (2), a California Towhee (1), a common raven (1), Cooper's hawks (3), European starlings (2), golden-crowned sparrows (3), a house finch (1), an osprey (1), a red-shouldered hawk (1), a red-winged blackbird (1), savannah sparrows (2), a sharp-shinned hawk (1), a Steller's jay (1), a western scrub-jay (1), and yellow-billed magpies (3). The savannah sparrow was the first of their species to test positive for WNV this year.

The positive birds were collected within the counties of Alameda (1), Contra Costa (2), Fresno (1) Kern (3), Madera (1), Marin (1), Mendocino (2), Merced (3), Monterey (1), Orange (1), Plumas (1), Sacramento (2), San Diego (1), San Mateo (1), Santa Cruz (6), Sonoma (2), and Yolo (1).

A total of 67 dead birds were tested, thus 45.0% (30/67) of the birds tested from these counties were WNV positive.

No additional American crows were tested via Vec-Test, therefore the YTD total stands at 3,106 positive bird carcasses.

News Flash:

CVEC reported last Wednesday that 19 of 88 dead birds have tested positive for WNV. The positive birds were collected within the 13 counties of Glenn (1), Mariposa (1), Merced (1), Monterey (1), Orange (2), Sacramento (1), San Diego (1), San Francisco (1), San Joaquin (2), Santa Clara (2), Santa Cruz (1), Sonoma (2), and Stanislaus (3).

Mosquito Pools:

CVEC reported two positive pools from Orange (2) County. To date, 20 CA counties have reported positive mosquito activities. WNV has been isolated from nine mosquito species: *Culex tarsalis* (315), *Cx. erythrothorax* (19), *Cx. quinquefasciatus*, (740) *Cx. stigmatosoma*, (41), *Cx. thriambus* (3), *Cx. pipiens* (13), *Anopheles hermsi* (1), *Ochlerotatus squamiger* (1) and *Oc. melanimon* (2). The YTD total stands at 1135 positive pools.

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Chickens:

Nineteen WNV chicken seroconversions were detected in 15 flocks from Fresno (1), Kern (2), Los Angeles (7), Riverside (1), Sacramento (5), Stanislaus (2) and Yolo (1) counties. Of the 19 seroconversions, 9 came from new flocks in Fresno (1), Kern (1), Los Angeles (2), Sacramento (4), and Stanislaus (1) counties. This is the first seroconversion reported from West Side MVCD in Kern County. Currently, 22 counties: Butte, Fresno, Glenn, Imperial, Kern, Kings, Lake, Los Angeles, Orange, Placer, Riverside, Sacramento, San Bernardino, San Joaquin, Santa Clara, Shasta, Stanislaus, Sutter, Tehama, Tulare, Ventura, and Yolo have positive WNV seroconversions. The current YTD total stands at 782 WNV seroconversions.

Website Information:

For updated information on WNV, please visit the California WNV website, www.westnile.ca.gov; the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov. Please go to the Vector website at <http://vector.ucdavis.edu/arbo.html> for flock location and more information on WNV and other vector-borne diseases.

TESTING SUMMARIES

Humans and Equines

		Number Tested	WNV Positive		WEE Positive		SLE Positive		Other Positive	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Individuals Tested	Week	28	0	11	0	0	0	0	0	0
	YTD	1709	0	805	0	0	0	0	0	0
Suspect Equine Cases	Week	n/a	0	0	0	0	0	0	0	0
	YTD	1273	0	533	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	67	30
YTD	5,140	3,179

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
	YTD	30,557	782	0	0	0
Mosquito pools	Week	160	2	0	0	0
	YTD	14,690	1135	0	0	0

*This total has been adjusted to include local agency submission

POSITIVES

Human Positives Reported:

Virus	Date of Onset	Status	Diagnosis	County	Imported/Local	From
WNV	09/26/04	Probable	West Nile Neuroinvasive Disease	Kern	Local	
WNV	08/15/04	Probable	West Nile Fever	Los Angeles	Local	
WNV	08/02/04	Probable	West Nile Fever	Los Angeles	Local	
WNV	08/08/04	Probable	Unknown	Los Angeles	Local	
WNV	Unknown	Probable	Unknown	Los Angeles	Local	
WNV	Unknown	Probable	Unknown	Los Angeles	Local	
WNV	Unknown	Probable	Unknown	Los Angeles	Local	
WNV	10/10/04	Probable	West Nile Neuroinvasive Disease	Sacramento	Local	
WNV	07/28/04	Probable	West Nile Fever	San Bernardino	Local	
WNV	07/15/04	Probable	West Nile Fever	San Bernardino	Local	
WNV	10/14/04	Probable	West Nile Neuroinvasive Disease	San Diego	Local	

*Indicates Fatality

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Chicken Seroconversions Reported by DHS:

Virus	County	State	Acode	City	Location
**** WNV	Fresno	CA	CNSL5004	Caruthers	S. Turner Probable Seroconversion Date: 11-October-04
Bands: 1539					
WNV	Kern	CA	KERN0112	Wasco	Wells residence Probable Seroconversion Date: 11-October-04
Bands: 2036					
**** WNV	Kern	CA	WEST6203	B.V. Lake	B. V. Lake Probable Seroconversion Date: 12-October-04
Bands: 3780					
WNV	Los Angeles	CA	ANTV3247	Lancaster	Fairgrounds Probable Seroconversion Date: 3-November-04
Bands: 1050					
WNV	Los Angeles	CA	ANTV8656	Lancaster	Volmer Probable Seroconversion Date: 3-November-04
Bands: 4160					
**** WNV	Los Angeles	CA	LACW1010	Los Angeles	La Brea Tar Pits Probable Seroconversion Date: 8-November-04
Bands: 2184, 2185					
WNV	Los Angeles	CA	LACW1026	Beverly Hills	Franklin Canyon Park Probable Seroconversion Date: 25-October-04
Bands: 2247					
WNV	Los Angeles	CA	LACW1073	Los Angeles	Downtown Los Angeles Probable Seroconversion Date: 8-November-04
Bands: 2239					
WNV	Los Angeles	CA	LONG0004	Long Beach	Long Beach Marina Oil Probable Seroconversion Date: 1-November-04
Bands: 4379					
WNV	Riverside	CA	RIVR0004	Beaumont	Cherry Valley Fire Station Probable Seroconversion Date: 3-November-04
Bands: 2787					
**** WNV	Sacramento	CA	SAYO7001	Galt	Galt Probable Seroconversion Date: 27-October-04
Bands: 2899					
**** WNV	Sacramento	CA	SAYO7003	Folsom	Folsom Probable Seroconversion Date: 27-October-04
Bands: 2861, 2862, 2868					
WNV	Sacramento	CA	SAYO7004	Sacramento	Natomas Probable Seroconversion Date: 27-October-04
Bands: 2858					
**** WNV	Stanislaus	CA	TRLK9703	Crows Landing	Vitoria's Dairy Probable Seroconversion Date: 11-October-04
Bands: 3695					
WNV	Stanislaus	CA	TRLK9703	Crows Landing	Vitoria's Dairy Probable Seroconversion Date: 25-October-04
Bands: 3690					
WNV	Yolo	CA	SAYO6002	Woodland	Merritt Probable Seroconversion Date: 27-October-04
Bands: 2918					

****Indicates a new flock

Virus Isolations From Mosquito Pools:

Virus	Mosquito species	Date Collected	ACODE	Pool #	City	County	Date Received
WNV	Culex quinquefasciatus	15-Oct	ORCO	1727	Cypress	Orange	22-Oct
WNV	Culex quinquefasciatus	19-Oct	ORCO	1755	Anaheim	Orange	22-Oct

Dead Birds Tested Positive for WNV last week

Species	County	City	ZIP	Date Collected	Date Tested
American Robin	Alameda	Piedmont	94611	10/25/04	11/1/2004

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Barn Owl	Contra Costa	Clayton	94517	10/22/04	11/1/2004
Brewer's Blackbird	Contra Costa	San Ramon	94583	10/27/04	11/1/2004
Sharp-Shinned Hawk	Fresno	Reedley	93654	10/15/04	11/1/2004
Brewer's Blackbird	Kern	Bakersfield	93308	10/13/04	11/1/2004
Cooper's Hawk	Kern	Bakersfield	93312	10/21/04	11/1/2004
Cooper's Hawk	Kern	Bakersfield	93309	10/25/04	11/1/2004
Yellow-billed Magpie	Madera	Chowchilla	93610	10/25/04	11/1/2004
American Crow	Marin	San Anselmo	94960	10/22/04	11/1/2004
Common Raven	Mendocino	Ukiah	95482	10/21/04	11/1/2004
Western Scrub-Jay	Mendocino	Ukiah	95482	10/22/04	11/1/2004
European Starling	Merced	Gustine	95322	10/25/04	11/1/2004
Savannah Sparrow	Merced	Los Banos	93635	10/13/04	11/1/2004
Yellow-billed Magpie	Merced	Hilmar	95324	10/26/04	11/1/2004
American Crow	Monterey	Carmel Valley	93924	10/25/04	11/1/2004
Red-Winged Blackbird	Orange	Irvine	92603	9/30/04	11/1/2004
Golden-crowned Sparrow	Plumas	Cromberg	96103	10/14/04	11/1/2004
American Crow	Sacramento	Sacramento	95814	10/22/04	11/1/2004
Yellow-billed Magpie	Sacramento	Sacramento	95825	10/25/04	11/1/2004
Red-Shouldered Hawk	San Diego	San Diego	92120	10/14/04	11/1/2004
Cooper's Hawk	San Mateo	San Bruno	94066	10/21/04	11/1/2004
California Towhee	Santa Cruz	Capitola	95010	10/21/04	11/1/2004
Golden-Crowned Sparrow	Santa Cruz	Ben Lomond	95005	10/21/04	11/1/2004
Golden-Crowned Sparrow	Santa Cruz	Ben Lomond	95005-	10/21/04	11/1/2004
Osprey	Santa Cruz	Santa Cruz	95060	10/25/04	11/1/2004
Savannah Sparrow	Santa Cruz	Scotts Valley	95066	10/18/04	11/1/2004
Steller's Jay	Santa Cruz	Aptos	95076	10/21/04	11/1/2004
American Crow	Sonoma	Santa Rosa	95405	10/21/04	11/1/2004
House Finch	Sonoma	Petaluma	94954	10/20/04	11/1/2004
European Starling	Yolo	Winters	95694	10/25/04	11/1/2004

***Indicates Vec-Test

National Comments:

As of November 8, 2004, a total of 2282 human WNV cases have been reported in 40 states, DC and New York City. At this time in 2003, 8393 cases had been reported from 44 states, DC, and NYC. Of the 2251 WNV cases where data is available, the median age is 52 years (range: 1 month – 99 years) and 59% are male. Thirty-six percent of the cases were classified as neuroinvasive, compared with 28% at this time in 2003. There have been 77WNV-related fatalities nationwide in 2004. The median age of the 77 fatalities where data were available was 74 years (range: 43-95 years).

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Dead Birds:

Dead bird kidney tissues are tested at CVEC using the PCR Taqman assay, subsequent to carcass necropsy at the California Animal Health and Food Safety (CAHFS) Laboratories. Organ pools from PCR positive carcasses are tested using cell culture for virus isolation. The WNV Dead Bird Surveillance Coordinator, Ryan Carney, can be reached directly at (510) 412-6251.

Crows from positive zip codes are no longer accepted for necropsy. Positive Vec-tests from oral swabs from crows are no longer confirmed. Other bird species tested by RT-PCR using singleplex and confirmed with a second primer set.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens submitted each week to the DHS Viral and Rickettsial Disease Laboratory (VRDL) are tested for the presence of antibodies to West Nile virus (WNV), western equine encephalomyelitis (WEE), and St. Louis encephalitis (SLE) viruses by EIA and IFA. The VRDL performs additional testing (including Plaque Reduction Neutralization (PRNT) and IgM Capture – Enzyme Linked Immunosorbent Assay (MAC-ELISA)) on specimens from sentinel chickens in which antibodies are detected in new geographic areas. The VRDL also forwards selected serum to the UC Davis Center for Vectorborne Diseases (CVEC) for additional testing for WNV, WEE, and SLE antibodies as needed.

Mosquito Pools:

All mosquito pools are screened for WEE, SLE, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR. There will be an elimination of *in situ* EIA testing for all mosquito species.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch) and the Viral and Rickettsial Disease Laboratory Branch, Division of Communicable Disease Control, California Department of Health Services, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Al Hom by phone (510) 412-6254, FAX (510) 412-6263, or email [ahom@dhs.ca.gov].